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EXAMINER
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SMITH, JOSHUA Y

ART UNIT	PAPER NUMBER
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2609

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/728,681	<b>Applicant(s)</b> ENCISO ET AL.	
	<b>Examiner</b> Joshua Smith	<b>Art Unit</b> 2609	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 12, 14, 15, 22, and 30 rejected under 35 U.S.C. 102(b) as being anticipated by Parry et al. (Patent No.: US 6,175,552 B1), hereafter referred to as Parry.

As for Claim 1, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports (substantively the same as “a first gateway network element to terminate a synchronous data transmission ring” in the instant invention).

Parry shows in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as “a second gateway network element to terminate an additional synchronous data transmission ring” in the instant invention).

Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as “a central switching core to directly interconnect the first and second gateway network elements” in the instant invention).

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Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and "instructs the remote switches 12 to reconfigure appropriately" (substantively the same as "a management element to interconnect the first and second gateway network elements with a central management system" in the instant invention).

As for Claim 3, Parry as applied to Claim 1 teaches all the limitations except a SDH ring. Parry further teaches in lines 20-21, column 3, of a SDH network layout comprising a number of rings (substantively the same as "a Synchronous Digital Hierarchy (SDH) ring" in the instant invention).

As for Claim 4, Parry as applied to Claim 1 teaches all the limitations except a SONET ring. Parry further teaches in lines 20-21, column 3, of a SONET network layout comprising a number of rings (substantively the same as "a Synchronous Optical Network (SONET) ring" in the instant invention).

As for Claim 12, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21)

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serving respective ports (substantively the same as “terminating ... synchronous data transmission ring on associated gateway network elements” in the instant invention).

Parry shows in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as “multiple synchronous data transmission ring” in the instant invention).

Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as “directly interconnecting the gateway network element through a central switching core” in the instant invention).

Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, “the network management system, indicated schematically as 62”, which “connects all of the master multiplexers 21 in the system” and “instructs the remote switches 12 to reconfigure appropriately” (substantively the same as “interconnecting the gateway network elements to a central management system with a local management element” in the instant invention).

As for Claim 14, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports (substantively the same as “terminating the synchronous data

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transmission rings” in the instant invention). As discussed above with respect to Claim 3, Parry further teaches in lines 20-21, column 3, of a SDH network layout comprising a number of rings (substantively the same as “a Synchronous Digital Hierarchy (SDH) ring” in the instant invention).

As for Claim 15, Parry as applied to Claim 14 teaches the limitation “terminating the synchronous data transmission rings”. As discussed above with respect to Claim 4, Parry further teaches in lines 20-21, column 3, of a SONET network layout comprising a number of rings (substantively the same as “a Synchronous Optical Network (SONET) ring” in the instant invention).

As for Claim 22, Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as “a central switching core to directly interconnect” in the instant invention).

Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports, and, in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as “a synchronous data transmission ring terminated on a first gateway network element with an additional synchronous data transmission ring terminated on a second gateway network element” in the instant invention).

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Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and "instructs the remote switches 12 to reconfigure appropriately" (substantively the same as "a local management element to interconnect the integrated switch with a central management system" in the instant invention).

As for Claim 30, Parry shows in lines 22-23, column 3, and in Fig. 1, Sheet 1 of 7, the number of rings are interconnected via a switch (item 12) (substantively the same as "directly interconnecting" in the instant invention).

Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports, and, in lines 20-21, column 3, and in Fig. 1, Sheet 1 of 7, an arrangement that comprises a number of the same rings, each of which incorporate the multiplexers (see item 21, Fig. 2, Sheet 2 of 7) serving respective ports (substantively the same as "a synchronous data transmission ring terminated on a first gateway network element" and "an additional synchronous data transmission ring terminated on a second gateway network element" in the instant invention).

Parry shows in lines 38-40, column 3, and in Fig. 2, Sheet 2 of 7, that each ring operates under the control of a master multiplexer (see item 21a) disposed at the

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switch. Parry also shows in lines 9-10, 21-23, column 5, and in Fig. 6, Sheet 6 of 7, "the network management system, indicated schematically as 62", which "connects all of the master multiplexers 21 in the system" and "instructs the remote switches 12 to reconfigure appropriately" (substantively the same as "maintaining a gateway management communication channel between a central management system and the first and second gateway network elements" in the instant invention).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2, 13, 23, and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry et al. (Patent No.: US 6,175,552 B1) in view of Douglas (Patent Number: 5,097,469), hereafter referred to as Parry and Douglas, respectively.



As for Claim 2, Parry as applied to Claim 1 teaches all the limitations except network elements manufactured by different vendors. However, in the same field of endeavor, Douglas teaches in lines 50-51, column 2, that a data communications network may have equipment manufactured by different suppliers (substantively the same as "network elements manufactured by different vendors" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the passive monitor of Douglas into the disaster recovery system of Parry since passive monitoring of traffic can provide information to aid in rerouting data traffic efficiently in the event of a switch failure and to monitor the health of the network after such a failure without introducing probe packets or similar traffic into the network.

As for Claim 13, as discussed above with respect to Claim 1, Parry shows in lines 29-30, column 3, in the abstract, and in Fig. 2, Sheet 2 of 7, a synchronous ring that incorporates a number of multiplexers (item 21) serving respective ports (substantively the same as "terminating the synchronous data transmission rings comprises terminating the synchronous transmission rings with network elements" in the instant invention).

Parry does not teach network elements manufactured by different vendors. However, as discussed above with respect to Claim 2, Douglas teaches in lines 50-51 that a data communications network may have equipment manufactured by different suppliers (substantively the same as "network elements manufactured by different

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vendors " in the instant invention). The motivation to combine the invention of Douglas with the invention of Parry is discussed above with respect to Claim 2.

Claim 23 appears to contain limitations in Claims 2 and 22, addressed above.

Claim 31 appears to contain limitations in Claims 2 and 30, addressed above.

Claims 5-7, 16, 17, 24, 25, and 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Chen et al. (Patent No.: US 7,130,276 B2), hereafter referred to as Chen.

As for Claim 5, Parry as applied to Claim 1 teaches all the limitations except for a packet-based switching fabric overlaid with a synchronous frame structure. However, in the same field of endeavor, Chen teaches in lines 39-40, column 2, of a "switching fabric of a network switch", and, in lines 40-43, column 3, and in FIG. 1, Sheet 1 of 11, Chen shows a cell/packet switching engine (see item 140) providing switching at the cell/packet level, and its resulting data is sent to the ATM/POS framer (see item 150) for framing in the appropriate format (substantively the same as "the central switching core includes a packet-based switching fabric overlaid with a synchronous frame structure" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the network switch of Chen into the telecommunications network of Parry since the network switch works with synchronous technology and allows switching of not only

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SONET and TDM data, but also ATM and IP data, increasing the flexibility and capabilities of the telecommunications network.

As for Claim 6, Parry shows in lines 19-26, column 3, and FIG. 1, Sheet 1 of 7, that the rings of the arrangement are interconnected via the switch (item 12), and the switch forms network node which is coupled to further network switches to transport traffic between nodes, where this will cause traffic from individual rings to be funneled to other rings and nodes, causing traffic from each individual ring to be a tributary when combined with traffic from other individual rings (substantively the same as "the central switching core comprises a switching platform to switch a traffic stream tributary across the one and the additional synchronous data transmission rings" in the instant invention).

Claim 16 appears to contain limitations in Claims 5 and 12, addressed above.

Claim 17 appears to contain limitations in Claim 16, addressed above.

Claim 24 appears to contain limitations in Claim 6, addressed above.

Claim 32 appears to contain limitations in Claims 6 and 30, addressed above.

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Claims 7 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Chen, and in further view of Roy et al. (Patent No.: US 6,631,130 B1), hereafter referred to as Roy.

As for Claim 7, the references as applied to Claims 1 and 5 teach all the limitations except for a PDU traffic stream termination card comprising a gateway element, a TDM termination card comprising the other gateway element, or a switch that switches both stream types. However, in the same field of endeavor, Roy teaches in lines 65-67, column 2, and lines 1-3, column 3, a network switch that has at least one interface for TDM traffic and at least one interface for ATM and packet traffic, implicitly teaching that the network switch can be connected to a TDM network device and an IP network device (where the PDUs of IP are packets), and the network switch can switch both types of traffic (substantively the same as "the first gateway network element comprises a Protocol Data Unit (PDU) traffic stream termination card and the second gateway network element comprises a Time-Division Multiplex (TDM) traffic stream termination card, and the central switching core switches both streams" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the switch of Roy into the network of Parry and Chen since the switch has interfaces for both SONET and ATM/packet traffic, and such capabilities will allow the switch to connect to ATM, packet, and TDM devices and networks, allowing the network to be scalable with these other technologies and accept these traffic types.

Claim 25 appears to contain limitations in Claim 7, addressed above.

Claims 8, 9, 10, 18-20, 26-28, 33-35 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Heuer et al. (Patent No.: US 6,717,953 B1), hereafter referred to as Heuer.

As for Claim 8, Parry as applied to Claim 1 teaches all the limitations except a network element that employs a management communication channel that is incompatible with the central management system. However, in the same field of endeavor, Heuer shows in FIG. 1, Sheet 1 of 3, an SDH system (item 11) connected with a SONET system (item 13). Lines 19-24, 49, 65-67, column 4, of Heuer teach that the SDH management system (see item 28, FIG. 1, Sheet 1 of 3) can manage both the SDH and SONET rings concurrently, but that the SONET signals of the SONET ring must be converted since SONET signals are not usable by the SDH management system (substantively the same as "least one of the first and the second gateway network elements employing a management communication channel that is incompatible with the central management system" in the instant invention).

Heuer teaches in lines 45-47, column 4, and in FIG. 2, Sheet 1 of 3, the conversion must be performed in either multiplexer (see items 28 and 29) (substantively the same as "the management element interconnects the first and the second gateway network elements to the central management system " in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the facility of Heuer into the network of Parry since the conversion of SONET

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signals into an SDH signals will allow SONET networks to be connected to a SDH network of Parry and be managed by the SDH network management system and participate in the disaster recovery.

Claim 18 appears to contain limitations in Claim 8 and 12, addressed above.

Claim 26 appears to contain limitations in Claim 8, addressed above.

As for Claim 33, the references as applied to Claims 8 and 12 teach all the limitations except for natively supporting of the incompatible management channels. Heuer further teaches in lines 56-61, column 3, and FIG. 1, Sheet 1 of 3, that SDH and SONET systems can be connected by a STM-1 link, and, despite differences that make them incompatible and require conversion for management purposes (see Heuer, lines 19-24, column 4), the frame formats of the two systems are identical and both can operate on the STM-1 link (substantively the same as "natively supporting multiple incompatible management communication channels" in the instant invention). The motivation to combine the invention of Heuer with the invention of Parry is discussed above with respect to Claim 8.

Claims 9 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Heuer, and in further view of Houston et al. (Patent No.: US 6,778,541 B2), hereafter referred to as Houston.

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As for Claim 9, the references as applied to Claim 8 teach all the limitations except for where one network element employs an IP stack and a second network element employs an OSI stack. However, in the same field of endeavor, Houston shows in Fig. 1, Sheet 1 of 9, an IP router (see item 24) which employs an IP stack like that shown as item IP STACK 34, Fig. 3, Sheet 3 of 9 (substantively the same as "the first gateway network element employs an Internet Protocol (IP) stack" in the instant invention).

Houston also shows in Fig. 1, Sheet 1 of 9, a network element item 12, that employs an OSI stack like that shown as item OSI STACK 32, Fig. 3, Sheet 3 of 9 (substantively the same as "the second gateway network element employs an an Open System Interconnection (OSI) stack in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the network element of Houston into the network of Parry and Heuer since Houston provides tunneling between SDH and IP networks, allowing the network of Parry to accept data from outside IP networks.

As for Claim 19, the references as applied to Claims 8 and 12 teach all the limitations except an IP network element and an OSI management system. However, in the same field of endeavor, Houston shows in Fig. 1, Sheet 1 of 9, an IP router (see item 24) which employs an IP stack like that shown as item IP STACK 34, Fig. 3, Sheet 3 of 9 (substantively the same as "a network element that employs an Internet Protocol (IP) stack" in the instant invention).

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Houston also shows in Fig. 1, Sheet 1 of 9, a SDH/SONET network item 20 that employs OSI connections and employs an OSI stack like that shown as item OSI STACK 32, Fig. 3, Sheet 3 of 9 (substantively the same as "supports an Open System Interconnection (OSI) stack and not the IP stack" in the instant invention). The motivation to combine the invention of Houston with the invention of Parry and Heuer is discussed above with respect to Claim 9.

Claims 10, 20, 28, and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Heuer, and in further view of Doidge et al. (Patent Number: 6,064,674), hereafter referred to as Doidge.

As for Claim 10, the references as applied to Claim 8 teach all the limitations except for incompatible applications of OSI stacks. However, in the same field of endeavor, Doidge shows in FIG. 2, Sheet 2 of 12, a LAN switch (item 20) connected to a network of ATM devices, where, in lines 65-67, column 7, "incompatible OSI layers 2 and 3 protocols of the LAN frames and the ATM network" (substantively the same as "the applications of the OSI stacks between the first and second gateway network elements are incompatible" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the apparatus of Doidge into the network of Parry and Heuer since the apparatus allows the converting of different protocols efficiently through hardware and without requiring intervention by a microprocessor, allowing the network to efficiently accept data from protocols other than its own.



As for Claim 20, the references as applied to Claims 8 and 12 teach all the limitations except incompatible applications of the OSI stack. However, in the same field of endeavor, Doidge shows in FIG. 2, Sheet 2 of 12, a LAN switch (item 20) connected to a network of ATM devices, where, in lines 65-67, column 7, "incompatible OSI layers 2 and 3 protocols of the LAN frames and the ATM network" (substantively the same as "... employs a different, incompatible application of the OSI stack than an application of the OSI stack supported by the ..." in the instant invention). The motivation to combine the invention of Doidge with the invention of Parry is discussed above with respect to Claim 10.

Claims 11, 21, 29, and 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Nakatsugawa (Patent No.: US 6,747,982 B2), hereafter referred to as Nakatsugawa.

As for Claim 11, Parry as applied to Claim 1 teaches all the limitations except for an interface to the central switching to locally drop traffic from a tributary on a synchronous data transmission ring terminated on a first gateway network element. However, in the same field of endeavor, Nakatsugawa shows in lines 2-9, FIG. 4, Sheet 4 of 6, that a single gateway (see item 11, FIG. 1, Sheet 1 of 6) can have two separate function blocks (see items 63 and 65, FIG. 4, Sheet 4 of 6), and when function block item 63 receives data from its respective LAN (see item 3, FIG. 4) that does not have a destination on its respective LAN, it sends the data through route 23 within the gateway

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to function block item 64 for processing (substantively the same as “an interface to interconnect with the central switching core to locally drop traffic from a tributary on a synchronous data transmission ring terminated on the first gateway network element” in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to adopt the method of Nakatsugawa into the network of Parry since Nakatsugawa provides an efficient routing method and gateway for a loop network.

Claim 21 appears to contain limitations in Claim 11, addressed above.

Claim 29 appears to contain limitations in Claim 11, addressed above.

Claim 36 appears to contain limitations in Claims 11 and 33, addressed above.

Claims 27, 28, 34, and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Heuer, and in further view of Hunneyball (Pub. No.: US 2004/0136389 A1), hereafter referred to as Hunneyball.

As for Claim 27, the references as applied to Claim 8 teach all the limitations except for mutually incompatible IP and OSI management channels running over DCC. However, in the same field of endeavor, Hunneyball teaches in the abstract of OSI protocols running over a network of embedded Data Communications Channels and of MPLS/IP protocols running over a network of embedded Data Communication Channels

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(substantively the same as "management channels include Internet Protocol (IP) over Data Communication Channel (DCC) and Open System Interconnection (OSI) over DCC" in the instant invention).

It would have been obvious to one skilled in the art at the time of the invention to combine aspects of the network of Hunneyball into the network of Parry and Heuer since Hunneyball provides a management system that allows MPLS enabled network devices to be managed on SDH ring networks.

Claim 34 appears to contain limitations in Claims 27 and 33, addressed above.

Claims 28 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Parry in view of Heuer, Doidge, and Hunneyball.

Claim 28 appears to contain limitations in Claims 10 and 27, addressed above.

Claim 35 appears to contain limitations in Claims 28 and 33, addressed above.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fontana et al. (Pub. No.: US 2003/0118041 A1) teaches a method of interconnecting ring networks. Mesh et al. (Pub. No.: US 2002/0085591 A1) teaches a fiber optic communication system of rings interconnected through aggregators. Taubert et al. (Patent No.: US 6,721,353 B1) teaches incompatible OSI

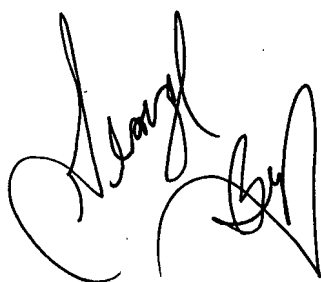
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layer environments. Sitbon et al.(Patent Number: 5,568,497) teaches a device that operates between TCP/IP and OSI/CO networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Smith whose telephone number is 571-270-1826. The examiner can normally be reached on Monday through Friday, 7:30 AM to 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Joshua Smith', with a stylized flourish at the end.